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Martin Bergenwall

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MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND POPEO, P.C
ONE FINANCIAL CENTER
BOSTON, MA 02111

EXAMINER

MATTIS, JASON E

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/070,212	Applicant(s) BERGENWALL ET AL.	
	Examiner JASON E. MATTIS	Art Unit 2461	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 16, 18-20 and 22-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 16, 18-20 and 22-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the Amendment filed 10/15/09. Due to the claim amendments, the previous rejections under 35 U.S.C. 101 have been withdrawn. Claims 11-15, 17, and 21 have been canceled. Claims 1-10, 16, 18-20, and 22-27 are currently pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6-9, 16, 18, 19, 22-25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dispensa et al. (U.S. Pat. 6636501 B1) in view of Chen (U.S. Pat. 6392997 B1).

With respect to claims 1 and 16, Dispensa et al. discloses an apparatus in a system (**See column 5 lines 50-61 and Figure 2 of Dispensa et al. for reference to a module 23, which is an apparatus in a system**). Dispensa et al. also discloses a memory configured to store a pre-defined list of rules for detecting packets and a detector configured to detect special data packets in a received plurality of data packets based on the pre-defined list of rules (**See column 8 lines 33-43 and Figure 6 of**

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Dispensa et al. for reference to module 23 having a memory to store rules and a unit to use the stored rules to detect packets in step 61). Dispensa et al. further discloses a router configured to request instructions for the special data packets detected and route the special data packets in accordance with instructions received on request **(See column 8 line 33 to column 9 line 2 and Figure 6 of Dispensa et al. for reference to module 23 requesting instructions in steps 62 and 65 and for reference to module 23 routing packets in accordance with received instructions in steps 64, 69, and 71).** Dispensa et al. also discloses an internal entity configured to store instructions for the special data packets wherein the router is configured to notify the internal entity of detected special packets and request instructions **(See column 6 lines 42-56, column 8 lines 33-43, and Figure 6 of Dispensa et al. for reference to the module 23 having a cache memory, which is an internal entity, storing instructions for routing data packets and receiving request for instructions in step 62).** Dispensa et al. further discloses a node configured to update the instructions stored in the internal entity during active operations **(See column 5 line 62 to column 6 line 7, column 8 lines 57-63, and Figures 2 and 6 of Dispensa et al. for reference to main router module 22, which is a node, updating the cache of module 23 in step 68 during active operations).** Dispensa et al. does not specifically disclose that the node is a gateway node that determines and updates instructions and is connectable to at least one further router located outside the apparatus.

With respect to claims 6 and 22, Dispensa et al. discloses a method performed by a computer program implemented on a computer readable medium **(See the**

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abstract and column 7 lines 5-15 of Dispensa et al. for reference to a routing method performed by software implemented on a microprocessor). Dispensa et al. also discloses storing a pre-defined list of rules for detecting special data packets and detecting special data packets in a received plurality of data packets based on the rules **(See column 8 lines 33-43 and Figure 6 of Dispensa et al. for reference to module 23 storing rules and using the stored rules to detect packets in step 61).** Dispensa et al. further discloses requesting instructions for the detected special data packets and routing the packets in a data network in accordance with instructions received **(See column 8 line 33 to column 9 line 2 and Figure 6 of Dispensa et al. for reference to module 23 requesting instructions in steps 62 and 65 and for reference to module 23 routing packets in accordance with received instructions in steps 64, 69, and 71).** Dispensa et al. also discloses notifying an internal entity of the detected special data packets and requesting instructions for the packets from the internal entity **(See column 6 lines 42-56, column 8 lines 33-43, and Figure 6 of Dispensa et al. for reference to the module 23 having a cache memory, which is an internal entity, storing instructions for routing data packets and receiving request for instructions in step 62).** Dispensa et al. further discloses a node updating the instructions stored in the internal entity during active operations **(See column 5 line 62 to column 6 line 7, column 8 lines 57-63, and Figures 2 and 6 of Dispensa et al. for reference to main router module 22, which is a node, updating the cache of module 23 in step 68 during active operations).** Dispensa et al. does not specifically disclose the method operating in an apparatus with the node being a gateway node that

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determines and updates instructions and is connectable to at least one further router located outside the apparatus.

With respect to claims 18 and 23, Dispensa et al. discloses a network element **(See column 5 lines 50-61 and Figure 2 of Dispensa et al. for reference to a module 23, which is a network element)**. Dispensa et al. also discloses a router configured to request instructions for special data packets detected by a detector and route the special data packets in accordance with instructions received on request **(See column 8 line 33 to column 9 line 2 and Figure 6 of Dispensa et al. for reference to module 23 requesting instructions in steps 62 and 65 and for reference to module 23 routing packets in accordance with received instructions in steps 64, 69, and 71)**. Dispensa et al. also discloses the router is configured to notify an internal entity of detected special packets and request instructions for the packets from the internal entity **(See column 6 lines 42-56, column 8 lines 33-43, and Figure 6 of Dispensa et al. for reference to the module 23 having a cache memory, which is an internal entity, storing instructions for routing data packets and receiving request for instructions in step 62)**. Dispensa et al. further discloses the router notifying a node of detected packets and requesting instructions from the external entity instead of the internal entity **(See column 5 line 62 to column 6 line 7, column 8 lines 51-56, and Figures 2 and 6 of Dispensa et al. for reference to main router module 22, which is an entity external to module 23, receiving a request for instructions from module 23 in step 65)**. Dispensa et al. does not specifically disclose that the node is a gateway node connectable to at least one further router located outside the apparatus.

With respect to claims 24 and 27, Dispensa et al. discloses a method performed by a computer program implemented on a computer readable medium **(See the abstract and column 7 lines 5-15 of Dispensa et al. for reference to a routing method performed by software implemented on a microprocessor)**. Dispensa et al. also discloses requesting instructions for special data packet detected by a detector and routing the special data packets in accordance with instructions received on request **(See column 8 line 33 to column 9 line 2 and Figure 6 of Dispensa et al. for reference to module 23 requesting instructions for special packets in steps 62 and 65 and for reference to module 23 routing special packets in accordance with received instructions in steps 64, 69, and 71)**. Dispensa et al. further discloses notifying an internal entity of the detected special data packets and requesting instructions for the special data packets from the internal entity **(See column 6 lines 42-56, column 8 lines 33-43, and Figure 6 of Dispensa et al. for reference to the module 23 having a cache memory, which is an internal entity, storing instructions for routing data packets and for reference to cache being notified of a received special packet by receiving a request for instructions in step 62)**. Dispensa also discloses notifying a node of the detected special data packets instead of the internal entity and requesting instructions for the special data packets from the node instead of the internal entity **(See column 5 line 62 to column 6 line 7, column 8 lines 51-56, and Figures 2 and 6 of Dispensa et al. for reference to main router module 22, which is a node external to module 23, receiving a request for instructions from module 23 instead of the cache in step 65)**. Dispensa et al. does not

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specifically disclose that the node is a gateway node connectable to at least one further router located outside an apparatus comprising the gateway node.

With respect to claims 3 and 8, Dispensa et al. discloses the external entity updating the rules stored in the internal entity during active operations **(See column 5 line 62 to column 6 line 7, column 8 lines 57-63, and Figures 2 and 6 of Dispensa et al. for reference to main router module 22, which is an entity external to module 23, determining routing rules and updating the rules of module 23 in step 68 during active operations)**. Dispensa et al. does not specifically disclose the external entity determining the rules.

With respect to claims 1, 3, 6, 8, 16, 18, 22, and 23, Chen, in the field of communications, discloses a gateway node determining and updating routing instructions of multiple routers connected to the gateway node **(See column 4 lines 14-31, column 4 line 53 to column 5 line 26, column 6 line 35 to column 7 line 14, and Figure 1 of Chen for reference to an interdomain router 200, which is a gateway node connecting multiple routing domains, determining routing paths and generating and transmitting a routing update message that is sent to multiple neighboring peer routers that use the message to update routing instructions)**. Using a gateway node connectable to multiple routers has the advantage of allowing a single device to distribute instructions to more than one router of a network to better coordinate the routing instructions for packets at multiple routers within the network.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Chen, to combine using a gateway node

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connectable to multiple routers, as suggested by Chen, with the system and method of Dispensa et al., with the motivation being to allow a single device to distribute instructions to more than one router of a network to better coordinate the routing instructions for packets at multiple routers within the network.

With respect to claims 2 and 7, Dispensa et al. discloses the routing unit notifying the external entity of detected packets and requesting instructions from the external entity instead of the internal entity **(See column 5 line 62 to column 6 line 7, column 8 lines 51-56, and Figures 2 and 6 of Dispensa et al. for reference to main router module 22, which is an entity external to module 23, receiving a request for instructions from module 23 in step 65).**

With respect to claims 4, 9, 19, and 25, Dispensa et al. discloses modifying the special data packets in accordance with received instructions **(See column 8 lines 44-50 and Figure 6 of Dispensa et al. for reference to adding an adapter number and a port number to a data packet according to received instructions).**

4. Claims 5, 10, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dispensa et al. in view of Chen and in further view of Mori (U.S. Pat. 5751799).

With respect to claims 5, 10, 20, and 26, the combination of Dispensa et al. and Chen does not disclose an external charging entity.

With respect to claims 5, 10, 20, and 26, Mori, in the field of communications, discloses using an external charging entity **(See column 23 lines 13-20 and Figure 23 of Mori for reference to a packet routing network including a charging function**

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unit 90B, which is an external charging entity). Using an external charging entity has the advantage of allowing customers to be charged for network usage.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Mori, to combine using an external charging entity, as suggested by Mori, with the system and method of Dispensa et al. and Chen, with the motivation being to allow customers to be charged for network usage.

Response to Arguments

5. Applicant's arguments filed 10/15/09 regarding the fact that Dispensa et al. does not teach "a gateway node... configured to determine... the instructions stored in said internal entity" are persuasive and thus the previous grounds of rejection have been withdrawn. However, after further review of the prior art, it has been determined that Chen does teach a gateway node configured to determine routing instructions as claimed (See column 4 line 53 to column 5 line 26 of Chen for reference to an interdomain router determining next node routing instructions). Thus new grounds of rejection have been applied above over Dispensa et al. in view of Chen and this Office Action is made non-final.

Regarding Applicant's arguments that Dispensa et al. teaches away from substituting the gateway node of Chen for the main router of Dispensa et al., the Examiner respectfully disagrees. Although it is true that Dispensa et al. discloses a main router module not have a physical interface to other nodes, this does not mean that Dispensa et al. teaches away from a main router module that does have physical

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interfaces to other nodes. The exclusion of such interfaces is not deemed to be essential to the invention of Dispensa et al. and Dispensa et al. never states that the lack of such interfaces is beneficial or provides any advantage. Also, although the main router module 22 of Dispensa does not have a direct physical interface to other nodes, the main router module 22 is connected via high speed switching means 20 to router dispatcher module 21, which is connected to other nodes (See Figures 1 and 2 of Dispensa et al.) meaning the main router module 22 is indirectly connected to other nodes. Further, Dispensa et al. discloses that "the main router module 22 is devoted to conventionally building-up and maintaining up-to-date a routing table representing the current network topology as seen from the considered network node" and that "conventional network topology maintenance protocols involving so-called control traffic are used to that end" (See column 5 line 64 to column 6 line 2 of Dispensa et al.). It is well known that conventional network topology maintenance protocols rely on the exchange of routing and connectivity control messages between nodes of a network. Thus, Dispensa et al. does suggest the main router module 22 receiving control messages from other outside nodes via the router dispatcher module and the high speed switching means. Therefore, providing a direct physical connection between the main router module 22 and other nodes, as suggested by the interdomain router of Chen, provides the advantage of allowing routing messages to be directly transmitted and received by the main router module without compromising any functionality of the main routing module as disclosed by Dispensa et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON E. MATTIS whose telephone number is (571)272-3154. The examiner can normally be reached on M-F 8AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason E Mattis
Primary Examiner
Art Unit 2461

JEM

/Jason E Mattis/
Primary Examiner, Art Unit 2461